

## **ABSTRACT**

A form, fill and seal packaging machine for forming, filling and sealing a carton, molds a closure directly onto the carton. The machine includes a carton  
5 erection station adapted to receive a carton in a generally flat form and to erect the flat form carton into a tubular form defining an internal carton region. A direct injection molding station has an internal mold tool and an external mold tool. The internal mold tool is configured for receipt within the internal carton region and the internal mold tool and the external mold tool are configured to receive and clamp  
10 the carton therebetween. The direct injection molding station further includes a polymer injection system for injecting polymer from a location external of the carton to the internal mold tool. The closure is directly molded in place on the carton. A mold tool set, a method for carrying out the molding and a closure molded thereby are also disclosed.